

REMARKS

Claims 16 to 21, 24 to 28, 34, and 35 are pending and being considered in the present application. No new matter has been added. In view of the foregoing amendments and the following remarks, Applicants respectfully submit that all of the presently pending claims are allowable, and reconsideration of the present application is respectfully requested.

Claims 20, 21, 24, 25 to 28, 34 and 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art ("AAPA") in view of U.S. Patent No. 6,680,919 ("Rauhala") and U.S. Patent No. 6,571,173 ("Joshi").

Claims 24 has been amended herein without prejudice to recite the following:

dividing the linear object into a first set of equidistant coordinate points, wherein a traffic route network stored within a digital map of the receiver is divided into a second set of equidistant coordinate points;

for at least one point within the first set of points and for a plurality of potential displacement values, calculating the total number of points in the second set of points that lie within a predetermined radius of the at least one point after the linear object has been shifted according to each displacement value;

selecting the displacement value corresponding to the greatest of the calculated totals;

matching a portion of the traffic route network to the linear object by decoding the linear object in accordance with the selected displacement value; and

updating the digital map with the decoded linear object.

As presented, claim 24 provides that the linear object is divided into a set of equidistant coordinate points. The plausibility of various potential displacement values is then tested by calculating the total number of points in the traffic route network (which is also represented as a set of equidistant coordinate points) that lie within a predetermined radius of at least one point in the linear object. The displacement value that yields the highest total is then selected for use in decoding the linear object, thereby allowing the linear object to be matched to a corresponding portion of the traffic route network.

Although the Examiner contends that col. 7, lines 19 to 29 of Joshi discloses a *set of equidistant points*, the cited section actually refers to fixed *time intervals*, e.g., intervals

spaced apart every ten seconds (col. 7, lines 22 to 23). Therefore, Joshi does not teach or suggest the use of points that are spaced equally according to *distance*.

It is also apparent that the matching referred to in Joshi does not involve *calculating the total number of points in the second set of points that lie within a predetermined radius of at least one point after the linear object has been shifted according to each displacement value*. The Office Action appears to suggest that a low SAVC value inherently discloses the calculation above. However, any review of Joshi will reveal that the SAVC is a variance metric calculated based on the variance between angles formed by tangential vectors. Additionally, contrary to the assertions of the Office Action, a low SAVC does not indicate the exact proximity between two space curves. Although an SAVC value of zero indicates that the two curves are rotated, translated or scaled by the same amount so that the two curves are identical (col. 6, lines 19 to 31), the SAVC is only a general indicator of the dissimilarity between the two space curves. Further, that a match is made according to the portion a road network that yields the lowest SAVC value does not indicate the exact distance between a curve representing the vehicle trajectory and a curve representing a matched portion of the road network. Clearly, the SAVC does not explicitly or inherently provide a quantitative measure of how many points in the second space curve are within a *predetermined radius* of a point in the first space curve.

Accordingly, the combination of AAPA, Rauhala and Joshi does not disclose or suggest all of the features of claim 24 so that the combination does not render obvious claim 24 or any of its dependent claims, e.g., claims 20, 21 and 25.

Claim 26 has been amended herein without prejudice to provide for the same features discussed above in reference to claim 24. Accordingly, claim 26 and dependent claims 27, 28, 34 and 35 are allowable for at least essentially the same reasons given above for the patentability of claim 24.

Withdrawal of this obviousness rejection of claims 20, 21, 24, 25 to 28, 34 and 35 is therefore respectfully requested.

Claims 16 to 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Rauhala, Joshi and U.S. Patent App. Pub. No. 2003/0083809 (“Hatano”). Claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of Rauhala, Joshi and U.S. Patent No. 7,243,355 (“Espino”).

Claims 16 to 19 ultimately depend from claim 24 and are therefore allowable for at least the same reasons set forth above in support of the patentability of claim 24, since

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Hatano and Espino do not cure the deficiencies of AAPA, Rauhala and Joshi noted above in support of the patentability of claim 24.

Withdrawal of these obviousness rejections of claims 16 to 19 is therefore respectfully requested.

CONCLUSION

In light of the foregoing, it is respectfully submitted that all of the presently pending claims are in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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/Richard M. Rosati/
By: Richard M. Rosati (Reg. No. 31,792) for:
Gerard A. Messina (Reg. No. 35,952)

KENYON & KENYON LLP
One Broadway
New York, New York 10004
(212) 425-7200
CUSTOMER NO. 26646